

REMARKS

Please reconsider the application in view of the following remarks. Applicant thanks the Examiner for carefully considering this application.

The Applicant respectfully notes that page 2 of the Information Disclosure Statement (IDS) filed on December 4, 2004 was not initialed and returned by the Examiner. The Applicant respectfully requests that the Examiner initial and return page 2 of the IDS filed on December 4th.

Additionally, the Applicant respectfully notes that the claim to foreign priority has not been acknowledged by the Examiner. The Applicant also respectfully requests that the Examiner acknowledge this claim to foreign priority in the next Office Action.

I. Disposition of Claims

Claims 1-6, 14-20, and 23 are pending in this application. Claims 1 and 14 are independent. The remaining claims depend, directly or indirectly, from claims 1 and 14.

II. Rejection(s) under 35 U.S.C § 112

Claims 1-4, 14-20, and 23 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with written description requirement. In particular, it has been asserted that there is no basis in the specification for claiming “selectively measuring an inorganic carbonic acid concentration of an outlet water of an ion exchange resin vessel filled with an anion exchange resin, thereby avoiding influences from other acid ions,” as recited in claims 1 and 14. This rejection is respectfully traversed.

The Applicant believes that the claim language has been misinterpreted by the

Examiner. On page 3 of the Action, the Examiner states, “since the specification only has basis for a gas permeation membrane and not a selective gas permeation membrane for carbon dioxide a new matter rejection is issued.” However, claim 1 is a method claim, which recites “*selectively measuring* an inorganic carbonic acid concentration,” and claim 14 is an apparatus claim, which recites “an outlet monitoring *device for selectively measuring* an inorganic carbonic acid concentration.” The claim language does not recite or require that a permeation membrane itself performs the selective measurement. Rather, the claim language recites that a gas permeation membrane is used in conjunction with *a sensor*, which performs the “selectively measurement.” In particular, the embodiments of the present invention disclose using a gas permeable membrane to prevent dissolved ionic species from passing through to the sensor. The gas is then analyzed using a conductivity sensor to determine the concentration of carbon dioxide. The present application does not require determining the nature of the gas because an assumption is made that ordinary gases will not be measured by the sensor.

The instant specification provides support for the limitation of “selectively measuring an inorganic carbonic acid concentration,” for example, by disclosing using a conductivity measurement to find the carbonic acid concentration. Exemplary support may be found in the following excerpts from the specification.

- “For example, the target concentration for each of Na ion, Cl ion, and SO₄ ion is less than 0.1 µg/L” (p. 5, line 14-15).
- “...carbonic acid in the sample water permeate through the gas permeation membrane in a form of carbon dioxide gas” (p. 23, line 25).

- “It is clear from the above that because, in the conductivity sensor, the influence of any ionic constituents other than carbon dioxide is averted by the gas permeation membrane, the inorganic carbonic acid concentration can be measured accurately even for water having other ion constituents such as chloride and sulfuric acid ions” (p. 24, lines 13-18).

As indicated above, the condensate may include Na ion, Cl ion, and SO₄ ion and these Na, Cl, and SO₄ ions do not permeate through the gas permeation membrane. However, carbon dioxide does permeate through the permeation membrane, in addition to ordinary atmospheric gases (*e.g.*, oxygen and nitrogen). The sensor selectively measures the carbon dioxide concentration, as the ordinary atmospheric gases do not affect the detected conductivity. In other words, in one or more embodiments of the present invention, the sensor selectively measures the electric conductivity, which is assumed to be influenced only by the presence of carbon dioxide concentration. Even though oxygen and nitrogen may permeate the gas permeation membrane, these atmospheric gases are not conductive, and thus, are not measured by the sensor.

Because the subject matter of claims 1-6, 14-20, and 23 is clearly described in a way to reasonably convey to one of ordinary skill in the art that the inventor had possession of the claimed invention, at the time the application was filed, claims 1-6, 14-20, and 23 comply with the written description requirement. Accordingly, withdrawal of the §112 rejection is respectfully requested.

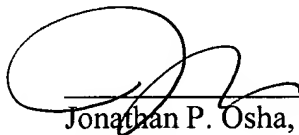
III. Conclusion

The above remarks are believed to require no further prior art search, as no claim amendments were made and thus the scope of the present invention has not changed. Also, Applicant believes that this reply is responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Because the remarks simplify the issues for allowance or appeal, and do not constitute new matter, entry and consideration thereof is respectfully requested. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 08228/017001).

Respectfully submitted,

Date: _____

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